Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method for an intermediary device to provide responses to discovery requests for services when a registry of services is unavailable, comprising:

receiving, by the intermediary device, from a client a discovery request for a service;

determining, by the intermediary device, whether the registry is unavailable, the determining including determining an online client state or offline client state of the client indicative of whether the client is communicatively coupled with the registry;

altering, by the intermediary device, the discovery request into a modified request appearing to originate from the intermediary; and

if the registry is determined to be unavailable, queuing, by the intermediary device, the modified discovery request for delivery to the registry when it becomes available.

2. (Currently Amended) The method of claim 1, further comprising:

providing, by the intermediary device, to the client a dummy response to the request indicating the service is available.

3. (Currently Amended) The method of claim 1, wherein the method further comprisinges:

~~determining the registry is available;~~

forwarding, by the intermediary device, the modified request to the registry when the registry is determined to be available;

receiving, by the intermediary device, in response, a reply from the registry for the forwarded discovery request;

altering, by the intermediary device, the received reply into a modified reply appearing to originate from the intermediary; and

sending, by the intermediary device, the modified reply to the client.

4. (Original) The method of claim 3, wherein the reply from the registry includes an identification of a service provider available to perform the requested service.

5. (Currently Amended) The method of claim 4, further comprising:

receiving, by the intermediary device, at least one service request from the client for utilizing the service;

altering, by the intermediary device, the service request into a modified service request appearing to originate from the intermediary; and

forwarding, by the intermediary device, the modified service request to the service provider available to perform the requested service.

6. (Currently Amended) The method of claim 5, further comprising:

starting, by the intermediary device, a timer measuring unavailability of the service provider;

determining, by the intermediary device, the timer exceeds a threshold, and responsive thereto, replying to the client discovery request with an error.

7. (Currently Amended) The method of claim 2~~1~~, wherein the dummy response indicating availability of the service identifies the intermediary as an available service provider for the service.

8. (Original) The method of claim 1, wherein the discovery request comprises a UDDI discovery request.

9. (Cancelled)

10. (Currently Amended) The method of claim 1~~9~~, further comprising:

receiving, by the intermediary device, at least one successive request from the client for the service;

if in the online client state, replying, by the intermediary device, to the client that the service is no longer provided.

11. (Original) The method of claim 10, wherein the client is configured to perform another discovery request for the service responsive to the reply if the service is no longer provided.

12. (Currently Amended) The method of claim 1, further comprising:

receiving, by the intermediary device, at least one successive request from the client identifying the service; and

replying, by the intermediary device, to the client that the service is no longer provided, wherein the client is configured to repeat its discovery request for the service responsive to the reply the service is no longer provided.

13. (Currently Amended) The method of claim 1, further comprising:

receiving, by the intermediary device, a second service request from the client for the service;

repeating, by the intermediary device, said determining whether the registry is unavailable;

if available, replying, by the intermediary device, to the client that the service is no longer provided; and

if ~~not~~ unavailable, altering, by the intermediary device, the second service request into a second modified request appearing to originate from the intermediary, and queuing the second modified request for delivery to the service registry when it becomes available.

14. (Original) The method of claim 1, wherein at least the client and intermediary utilize an asynchronous communication protocol.

15. (Original) The method of claim 14, wherein the client performs an other task while waiting for a response to an asynchronous discovery request.

16. (Currently Amended) The method of claim 1, further comprising:

if the registry is determined to be unavailable, starting, by the intermediary device, a timer measuring unavailability of the registry; and

determining, by the intermediary device, whether the timer exceeds a threshold, and responsive thereto, replying to the client discovery request with an error.

17. (Original) The method of claim 16, wherein the error comprises an indicator that the timer exceeded the threshold.

18. (Original) The method of claim 16, wherein the error comprises an indicator that no service provider is available to perform the requested service.

19. (Currently Amended) A method for an intermediary device to provide responses to discovery requests for services when a registry of services is unavailable, comprising:

receiving, by the intermediary device, from a client a discovery request for a service;

determining, by the intermediary device, whether the registry is unavailable, the determining including determining an online client state or offline client state of the client indicative of whether the client is communicatively coupled with the registry; ~~and responsive thereto,~~

if the registry is determined to be unavailable, replying, by the intermediary device, to the client that a pseudo service provider is available to perform the requested service, altering the discovery request into a modified request appearing to originate from the intermediary, and queuing the modified discovery request for delivery to the registry when it becomes available; and

if the registry is determined to be available,determining the registry is available, and responsive thereto, de-queuing, by the intermediary device, the modified discovery request, and submitting the modified discovery request to the registry.

20. (Currently Amended) The method of claim 19, further comprising:

receiving, by the intermediary device, a reply from the registry responsive to the modified discovery request, the reply identifying a service provider available to perform the requested service;

receiving, by the intermediary device, a service request from the client for utilizing the service;

altering, by the intermediary device, the service request into a modified service request appearing to originate from the intermediary; and

submitting, by the intermediary device, the modified service request to the service provider.

21. (Currently Amended) The method of claim 20, further comprising:

receiving, by the intermediary device, a response from the service provider;

altering, by the intermediary device, the response into a modified response appearing to originate from the intermediary; and

sending, by the intermediary device, the modified response to the client.

22. (Currently Amended) An article of manufacture comprising:

a machine-accessible storage medium;a and

a plurality of programming instructions stored on the storage medium, the programming instructions configured to program an intermediary device to, when executed by a processor of the intermediary device having associated data for an intermediary to provide responses to discovery requests for services when a registry of services is unavailable, wherein the data, when accessed, results in a machine performing:

receiveing from a client a discovery request for a service;

determineing whether the registry is unavailable, the determining including determining an online client state or offline client state of the client indicative of whether the client is communicatively coupled with the registry;

altering the discovery request into a modified request appearing to originate from the intermediary; and

if the registry is determined to be unavailable, queueing the modified discovery request for delivery to the registry when it becomes available.

23. (Currently Amended) The article of claim 22 wherein the ~~machine-accessible media further includes data, when accessed, results in the machine performing~~programming instruction are further configured to:

provideing to the client a dummy response to the request indicating the service is available.

24. (Currently Amended) The article of claim 22 wherein the programming instruction are further configured to~~machine-accessible media further includes data, when accessed, results in the machine performing~~:

~~determining the registry is available;~~

forwarding the modified request to the registry when the registry is determined to be available;

receiveing, in response, a reply from the registry for the forwarded discovery request;

altering the received reply into a modified reply appearing to originate from the intermediary; and

sending the modified reply to the client.

25. (Currently Amended) The article of claim 24 wherein the reply from the registry includes an identification of a service provider available to perform the requested service, and ~~the wherein the machine-accessible media further includes data, when~~

~~accessed, results in the machine performing~~programming instruction are further configured to:

receiv~~e~~ing at least one service request from the client for utilizing the service;

alter~~ing~~ the service request into a modified service request appearing to originate from the intermediary; and

forward~~ing~~ the modified service request to the service provider available to perform the requested service.

26. (Currently Amended) An article of manufacture comprising:

~~_____~~a ~~machine-accessible~~ storage medium; a and

~~_____having associated data for an intermediary to provide responses to discovery requests for services when a registry of services is unavailable, wherein the data, when accessed, results in a machine performing~~a plurality of programming instructions stored on the storage medium, the programming instructions configured to program an intermediary device to, when executed by a processor of the intermediary device:

receiv~~e~~ing from a client a discovery request for a service;

determin~~e~~ing whether the registry is unavailable, the determining including determining an online client state or offline client state of the client indicative of whether the client is communicatively coupled with the registry;

~~_____, and responsive thereto,~~ if the registry is determined to be unavailable, reply~~ing~~ to the client that a pseudo service provider is available to perform the requested service, alter~~ing~~ the discovery request into a modified request appearing to originate from the intermediary, and queu~~e~~ing the modified discovery request for delivery to the registry when it becomes available; and

~~determining the registry is available, and responsive thereto,~~ if the registry is determined to be available, de-queu~~e~~ing the modified discovery request, and submit~~t~~ing the modified discovery request to the registry.

27. (Currently Amended) The article of claim 26 wherein the ~~machine-accessible media further includes data, when accessed, results in the machine performing~~programming instructions are further configured to:

receiv~~ing~~e a reply from the registry responsive to the modified discovery request, the reply identifying a service provider available to perform the requested service;

receiv~~ing~~e a service request from the client for utilizing the service;

alter~~ing~~ the service request into a modified service request appearing to originate from the intermediary; and

submitt~~ing~~ the modified service request to the service provider.

28. (Currently Amended) The article of claim 27 wherein the ~~machine-accessible media further includes data, when accessed, results in the machine performing~~ programming instructions are further configured to:

receiv~~e~~ing a response from the service provider;

alter~~ing~~ the response into a modified response appearing to originate from the intermediary; and

send~~ing~~ the modified response to the client.

29. (Currently Amended) A client system comprising:

one or more processors;

a web service application program, operated by one of the processors and configured to utilize a web-service subsystem to asynchronously send discovery requests for a service; and

an intermediary, operated by the one or another of the processors and configured to determine an offline state for the client system, and when offline, to intercept discovery requests sent by the ~~client~~ web service application program and to reply to the ~~client~~ web service application program with a dummy response to trick the client into believing it maintains an online state.

30. (Original) The client system of claim 29, wherein the intermediary is further configured to forward discovery requests to a registry when the client obtains an online state.